TRAINERS' GUIDE for TRAINING



of Medical Officers in Pregnancy Care and Management of Common Obstetric Complications

Maternal Health Division Ministry of Health & Family Welfare Government of India

August 2009

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Printed with Support from WHO India

PREFACE

The Reproductive and Child Health Programme Phase-II, a flagship programme within National Rural Health Mission, aims to reduce maternal mortality ratio to less than 100 by 2010. There is a commitment from the Government of India and also from the States and UTs for providing Essential Obstetric Care at all facilities to achieve the goal of universal Skilled Birth Attendance. With this in view, Government of India has planned to operationalize all PHCs and FRUs in handling basic and comprehensive obstetric care, respectively.

Under the RCH Phase-II, the Government of India envisages that fifty percent of the PHCs and all the CHCs in all the districts would be made operational as 24-hour delivery centres, in a phased manner, by the year 2010. These centres would be responsible for providing Basic and Emergency Obstetric Care and Essential Newborn Care, including Newborn Resuscitation services round the clock. Almost all the States have laid emphasis in providing basic emergency obstetric care and skilled attendance at birth in the Project Implementation Plans (PIP) for RCH Phase-II.

As such, the Medical Officers, who are in-charge of these health facilities, would, therefore, have to be equipped enough to handle the common obstetric emergencies and provide the requisite care such as administration of parenteral oxytocics, antibiotics and anti-convulsant drugs, manual removal of the placenta, the conduction of assisted vaginal deliveries, etc.

Training tool for the training of Medical Officers at PHC on Pregnancy Care and Management of Common Obstetirc Complications have been developed in accordance with the **Guidelines for Pregnancy care and Management of Common Obstetric Complications by Medical Officers** include and Trainers Guide, Handbook and Workbook for the Trainees to manage Essential Obstetric Care. These tools have been prepared by Maternal Health Division in collaboration with Jawaharlal Lal Nehru Medical College, Belgaum with inputs from UNFPA and WHO. I hope the training guide will help the trainers who would be training medical officers from primary health centres to build their skills in use of procedures such as use of partograph, active management of third stage of labour, management of eclampsia and assisted vaginal deliveries. Workbook and handbook will help the trainees in acquisition of skills.

Date : 23.04.08

Now in Yay L Shri Naresh Dayal, Secretary H & FW New Delhi, India.

ACKNOWLEDGEMENT

To achieve the goals for reduction of maternal mortality and morbidity, GoI has a commitment under Reproductive and Child Health Programme to provide quality Antenatal, Postnatal and Intranatal care during pregnancy and child birth by a Skilled Birth Attendant. Timely identification and management of obstetric complications is the key to the survival of mothers.

To achieve this, Government of India envisages that fifty percent of the Primary Health Centres and all the Community Health Centres should be operationalised as 24-hour delivery centres with proficiency for providing basic and emergency obstetric services. These centres will also be responsible for providing pre-referral emergency care for women who develop complications during delivery. The training tools, i.e., Trainers' Guide, Trainees' Handbook and Workbook will help in imparting knowledge and skills to the MOs, which will help them in providing services to women in labour and obstetric emergencies thereby reducing maternal mortality.

The training package has been designed by the faculty of Jawaharlal Lal Nehru Medical College, Belgaum particularly Dr. B.S. Kodkany, Dr. Kamal Patil, Dr. M.K. Swamy and Mr. Killedar. Inputs have also been taken from professional bodies such as Federation of Obstetric and Gynaecological Societies of India (FOGSI), especially Dr. C.N. Purandere and Dr. Hema Diwakar, UN organizations, particularly Dr. Harish Kumar and Dr. Sonia Trikha of WHO-India and Dr. Dinesh Agarwal of UNFPA-India. I thank them all for their valuable contributions.

I also take this opportunity to acknowledge the contribution of all the experts, especially Dr. Deoki Nandan (Director, NIHFW), Dr. Kamala Ganesh (Ex H.O.D/Ob/Gyn, MAMC, Delhi), Dr. (Mrs) N.S. Mahanshetti and faculty of all the Medical Colleges of Karnataka. I also acknowledge the support of WHO in organizing meetings, workshops and providing necessary inputs for accomplishing the preparation of the guidelines.

The sincere and hard work of Dr Narika Namshum, Dr. Himanshu Bhushan, Dr. Manisha Malhotra, Dr. Avani Pathak and Dr. Rajeev Aggarwal from Maternal Health Division, MoHFW needs special mention.

I hope the Trainers' guide along with the Workbook & Guidelines will facilitate imparting quality training to medical officers from primary health centres to build their skills in pregnancy care and management of common obstetirc complications and help in ensuring high quality of trainings.

Aradhana Johri Joint Secretary, MoHFW New Delhi, India

Date : 23.04.08

FOREWORD

NRHM has a commitment for reduction of maternal & infant mortality/morbidity so as to meet the National and International goals. The reduction of MMR is related to quality of services rendered and also handling of Basic and Comprehensive Obstetric Care services at the health facilities particularly at Primary and Secondary level of the facilities.

National Rural Health Mission has the goal of reducing the maternal mortality ratio to less than 100 per 100,000 live births by 2012 & infant mortality rate to less than 30 per 1000 live births. To achieve these objectives, steps have been taken under NRHM to appropriately strengthen all PHCs and FRUs in handling Basic and Comprehensive Obstetric Care including Care at Birth. However, for the improvement of service delivery, it is important that medical officers are re-oriented on care during pregnancy & childbirth so that facilities can become efficient in handling complications related to pregnancy & care of new born.

GoI has already launched the training of paramedical workers i.e., Nurses, ANMs & LHVs for making them skilled in provision of care during pregnancy & child birth but the medical officers in rural primary care facilities have not been reoriented in these skills. These medical officers are also supposed to be the supervisors & trainers for the SBA training of Nurses, ANMs & LHVs. Therefore the PHC MOs need to up-grade their skills & knowledge in order to manage & support their team in skill birth attendance.

To achieve this, GoI has developed training tools & guidelines for Medical Officers at primary health facilities. It includes Trainers Guide Handbook and Workbook for the Trainees to manage Essential Obstetric Care. These have been prepared by Maternal Health Division of this Ministry with inputs from experts, professionals, development partners& leaders in the field.

I hope these training tools will facilitate the trainers in orienting the medical officers from primary health facilities in proficient use of essential procedures described in training manual. Similarly, trainees will also be benefitted by the handbook and workbook which has been prepared in line with the Guidelines for Pregnancy care and Management of Common Obstetric Complications by Medical Officers. I hope this will help in reducing the risk & trauma of pregnancy & child birth in community.

Date: 28.08.09

autrosod

(Amit Mohan Prasad) Joint Secretary H& FW Government of India

With the launch of National Rural Health Mission, many positive changes have taken place in public health, infrastructure and service delivery but still there is a scope for improvement in the quality of services being rendered. Reduction of maternal and infant mortality is linked with the quality of care during pregnancy and child birth. Skilled attendance in every pregnancy and during birth is a proven strategy for ensuring quality of services and for reducing maternal mortality. Training of midwifes and orientation of doctors is the key step which will help in providing skilled attendance during every pregnancy and birth taking place at public health facilities.

To improve skills of providers, training of ANMs/LHVs/SNs as Skilled Birth Attendant has already been in place but the Medical officers who are also the supervisors of this training need to be reoriented on the skills. A guideline on Pregnancy Care and Management of Common Obstetric Complications for Medical officers working at PHC and CHC level was prepared for this purpose in the year 2005. However, states could not implement it because the training tools were not available. As such, with the help of the experts and development partners, we have now developed three books i.e. Trainers Guide, Trainees Handbook and Workbook as a training tool for the medical officers.

There was some delay in bringing these books to the final shape because certain technical strategies like Use of Oxytocin at all the health facilities and updated package of Essential New Born Care and Resuscitation etc. were being firmed up. A 10 days' package for Medical officers is now in place but the guidelines are a facilitating tool. Objectives of the guidelines will only be achieved if there is a proper coordination, planning and decision making among all the key stakeholders within the state for conducting this training and utilizing the trained doctors at proper place.

I hope these training tools will facilitate both the trainers and trainees in reorientation of knowledge and skills for care during pregnancy and child birth and will help in reducing the risk & trauma of pregnancy & child birth in community. I take this opportunity to thank everyone who has contributed in framing the training package.

Hohnghan.

(Dr. Himanshu Bhushan) Assistant Commissioner Maternal Health Division MOHFW New-Delhi, INDIA

Date: 02.09.09

ABBREVIATIONS AND UNITS

@	At the rate of
0/0	Per cent
AMTSL	Active Management of Third Stage of Labour.
ANC	Ante-natal Care
ANM	Auxiliary Nurse-midwife
APH	Antepartum Haemorrhage
ASHA	Accredited Social Health Activist
BP	Blood Pressure
BPM	Beats Per Minute
c/o	Complaint of
ССТ	Controlled Cord Traction
СНС	Community Health Centre
CPD	Cephalopelvic Disproportion
D&C	Dilation and Curettage
e.g.	For example
EDD	Expected Date of Delivery
ENBC	Essential New Born Care
Etc.	Etcetra
FHR	Foetal Heart Rate
FHS	Foetal Heart Sound
FTD	Full Term Delivery
FOGSI	Federation of Obstetrics and Gynecological Societies of India
FRU	First Referral Unit
G(no.) P(no.) A(no.) L(no.)	Gravida(no.) Para(no.) Abortion(no.) Live Birth(no.)
GoI	Government of India
GPE	General Physical Examination
h/o	History of
Hb	Haemoglobin
Hg	Mercury
HIV	Human Immunodeficiency Virus
HLD	High Level Disinfection
i.e.	That is
IFA	Iron Folic Acid
I/o	Input/output

IM	Intramuscular
ICTC	Integrated Counselling and Testing Center
Inj.	Injection
IUD	Intrauterine Death
IUGR	Intrauterine Growth Retardation
IV	Intravenous
LLIN	Long Lasting Insectide Treated Bednets
LBW	Low Birth Weight
LMP	Last Menstrual Period
LR	Labour Room
MMR	Maternal Mortality Ratio
MOS	Medical Officers
MoHFW	Ministry of Health and Family Welfare
MRP	Manual Removal of Placenta
MTP	Medical Termination of Pregnancy
MVA	Manual Vacuum Aspiration
N/A	Not Applicable
NBC	New Born Care
NIHFW	National Institute of Health and Family Welfare
NRHM	National Rural Health Mission
NVBDCP	National Vector Borne Disease Control Programme
NSAID	Non-steroidal Anti-inflammatory Drug
O/E	On Examination
OPD	Out Patient Department
OT	Operation Theater
P/A	Per Abdomen
P/S	Per Speculum
P/V	Per Vaginum
P(no.) L(no.) A(no.)	Pregnancy (no.) Live-birth (no.) Abortion (no.)
РНС	Primary Health Centre
PIH	Pregnancy Induced Hypertension
PIP	Project Implementation Plan
PNC	Postnatal Care

PPH	Postpartum Haemorrhage
PROM	Premature or Prelabour Rupture Of Membranes
RL	Ringer Lactate
RCH	Reproductive and Child Health
RR	Respiratory Rate
RPR	Rapid Plasma Reagin
RTI	Reproductive Tract Infection
SBA	Skilled Birth Attendant
STI	Sexually Transmitted Infection
Tab	Tablet
ТВА	Traditional Birth Attendant
ΤT	Tetanus Toxoid
UIP	Universal Immunization Programme
UTI	Urinary Tract Infection
UNFPA	United Nation Population Fund Agency
VDRL	Venereal Disease Research Laboratory
VS	Versus
WHO	World Health Organization
°C	Degree Centigrade
mg/mcg	Milligram/Microgram
сс	Cubic Centimetre
cm	Centimetre
dl	Decilitre
gm	Gram
IU	International Units
kcal	Kilocalories
kg	Kilogram
L	Litre
Lb	Pound
mg	Milligram
ml	Millilitre
mm	Millimetre
U	Units

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INTRODUCTION

The Reproductive and Child Health Programme phase-II, under the overarching umbrella of the National Rural Health Mission, a flagship programme of the GoI aims to reduce maternal mortality ratio to less than 100 per 1,00,000 live births by the year 2010. The implementation framework of NRHM, also seeks to revamp the health care delivery system for provision of quality health services to women and children, especially in rural areas.

Technical strategies for reduction of maternal mortality include universal access to Skilled Attendance at Birth and timely access to quality services for timely management of life threatening obstetric complications. The National Programme Implementation Plan for RCH-II spells out the operational strategies for enabling health workers to provide skilled attendance at every birth. Various steps are being taken for making primary health centers functional 24×7 days with facilities to provide the full range of RCH services, including services for management of common obstetric complications which do not need major surgical intervention. Most of the obstetric complications can and should be managed at primary health centers.

Evidence from the states indicates a surge in the utilization of institutional delivery services at PHCs which are close to the poor women in rural areas. Provision of services for management of obstetric complications at these facilities will prevent delays in treatment. So, it is necessary to augment the capacity of medical officers at these facilities in diagnosing and managing obstetric complications. These training tools will help them in the re-orientation of their skills in diagnosing and managing obstetric complications.

The trainers' guide is meant to be used by trainers who would be training Medical officers from primary health centres to build their skills in use of procedures such as partograph, active management of third stage of labour, management of eclampsia post-partum haemmorrhage and assisted vaginal deliveries. Facilitators' Guide along with other aids such as work book and hand book would be useful tools to ensure optimal quality trainings.

AIMS AND OBJECTIVES

The purpose of this training is to enhance the capability of MBBS doctors posted at 24 x 7 PHCs and CHCs, so that they become proficient in identifying and managing basic obstetric complications and develop the necessary skills and competencies to provide essential obstetric and newborn care at the point of first contact with the client.

Specific objectives (knowledge based)

After completion of the training, the MOs are expected to update and reinforce their knowledge to:

- 1. Provide quality antenatal care, intra-partum care, including monitoring of labour with partograph, active management of third stage of labour and postpartum care.
- 2. Manage common obstetric problems such as anemia, hypertensive disorders of pregnancy including eclampsia, haemorrhage, abortion, puerperal sepsis, prolonged labour, preterm labour, foetal distress, prolapsed cord, twins, etc. and stabilize women before and during referral to the appropriate health facility.
- 3. Do step wise practice on "essential newborn care" and take steps to ensure good health of the baby.

- 4. Appropriately use steps to prevent infections during pregnancy, child birth and postpartum period.
- 5. Make referral of complicated cases after initial management and stablization.

Skill based objectives:

At the end of the training the participants will be able to practice the following skills as per laid down standards and protocols:

- 1. Provide quality care and counseling to the woman during antenatal, labour and postpartum period.
- 2. Identify danger signs during pregnancy, labour, delivery and postpartum period along with the danger signs in newborn; provide supportive care prior to referral.
- 3. Monitor labour using partograph.
- 4. Practice active management of third stage of labour.
- 5. Follow routine infection prevention practices during pregnancy and child birth.
- 6. Provide essential newborn care to all new born and new born resuscitation, if required.

TRAINING SITE

Training Site:

- Hospital attached to a Medical College which is recognized by MCI and follows the norms of service delivery as laid down in "*Guidelines for Pregnancy Care and Management of Common Obstetric Complications by Medical Officers*".
- Medical College which has sufficient strength of trainers and is imparting training to post graduate students in Obstetrics and Gynecology.
- Has fulfilled the norms for "pre-requisite of training site", as mentioned below.

Pre Requisites for the Training Site :

- Has proper infrastructure and its readiness as per Annexure 1.
- Has a minimum delivery load of 150 every month and has facility for conducting caesarean section and other obstetrics related surgical interventions.
- Follows all protocols and practices, especially use of Partograph and active management of third stage of labour. (AMTSL).
- The clinical protocols such as AMTSL, Immediate management of PPH, Eclampsia and Essential Newborn Care etc. are displayed prominently in the labour room premises.

TRAINERS

Eligibility Criteria for Trainers:

• Faculty of Obstetrics/Gynaecology and Paediatrics from the medical colleges/district hospitals/identified training institutes shall be the main trainers.

- Nominated trainers must undergo orientation training.
- Only willing personnel should be nominated as trainers.
- The trainers need to spare extra time for this programme.
- Not more than 50% of the faculty should be involved in the training process at any point in time.
- The other staff such as Senior Resident/Registrar, etc., can supervise the trainee.
- One trainer can take up maximum two trainees and the batch size would be of 4 to 5 trainees each.

Roles and Responsibilities of the Trainers:

The trainer is expected to have a major influence on the development of the trainees' knowledge and skills. Before training, the trainer should ensure that he/she:

- Has undergone orientation for this training.
- These trainers in turn should orient other faculty from their department to the training programme, so that other staff besides them can also be nominated as trainer.
- Takes interest in imparting clinical skills to the trainees with emphasis on hands on training.
- Creates a positive training environment.
- Uses interactive training techniques.
- Ensures quality during the training.
- Follows the training components and manages time allocation appropriately.
- Monitors and assesses that the trainee is practicing the required skills during and in between the training and ensures that trainee under him/her is constantly supervised even after the trainer's duty hours.
- Maintains training records.

DURATION OF TRAINING

- Residential training of 10 days' duration.
- Out of 10 days, a minimum of 4-5 days should be spent in the labour room as 24 hours emergency duty.
- Refer to the details of the training schedule and session plan, listed in later sections.

TRAINEES

- The batch size would be of 4 5 trainees, i.e., MBBS doctors, who have been in state government services for at least 3 years and should not have less than 5 10 years remaining service in the state health services.
- Priority should be given to MOs who are already posted at 24 x 7 PHCs.

TRAINING PACKAGE

- Duration of training 10 days.
- Package consists of :

Sl. No		Trainee	Trainer
1	Guidelines for Pregnancy Care and Management of Common Obstetric Complications by Medical Officers	ReadingReference	 Reading Knowledge imparted to trainees should conform to the content of the guidelines.
2	Trainers' Guide for Training of MOs in Pregnancy Care & Management of Common Obstetric Complications		 Instructions on how to conduct the training. Issues dealing with the training-Assessment, Record keeping, etc. Sample answers to the case studies.
3	Trainees' Handbook for Training of MOs in Pregnancy Care & Management of Common Obstetric Complications	 Introduces the training component, Session plans, Case Study, etc. Key points and notes for quick reference. 	• Reading and practice material. like case study, etc.
4	Trainees' Workbook for Training of MOs in Pregnancy Care & Management of Common Obstetric Complications	 Contains case sheets which have to be filled. during <i>hands on practice</i>. Maintain record of the activities performed by him/her. Ensure that the activities performed by them are supervised by the trainer and have been duly certified. 	 Assessment of day to day activities of the trainee. Ensure that the tasks which have not been performed satisfactorily are repeated.

ASSESSMENT AND CERTIFICATION

- The assessment of clinical competence acquired by the trainee, constitutes a major component of trainee certification.
- Skills' assessment should be conducted as an integral component of performance during the posting and practicing of the skills.

- Assessment criteria are "Satisfactory/Unsatisfactory" as per the assessment of the trainer.
- During clinical sessions, the trainer has to observe how the trainee performs the skills and after taking into account the findings on the case sheets filled by the trainee, trainer has to certify.
- In case the trainer is not available or is off duty during performance of skills, trainer should ensure that trainee is adequately supervised and assessed, e.g., Doctor, In charge of LR/OT/OPD where the trainee is to be posted will act as supervisor during night duty/holiday/other than normal duty hours.
- Before final certification of the trainee, the trainer must supervise at least 25% of the number of cases mentioned in recommended client practice as in **Annexure 2**.
- In situations where enough cases are not available, hands on practice should be given on mannequins/models wherever possible.
- The trainees will be graded as satisfactory / needs re-orientation as per their overall performance. If they perform ≥ 70% of the important tasks (as mentioned in recommended critical client practice) satisfactorily, they can be certified for having completed the training successfully.
- Those trainees whose performance is certified as "unsatisfactory" will have to repeat the training. They will have to repeat 7 days of the training at the respective training institute before satisfactory completion of training leading to certification.
- Refer Annexure 2 for minimum procedures to be performed by the trainee.

RECORD KEEPING

- The trainees will keep record of all their activities in the Trainees' Hand Book and Work book and complete the specified number of activities as in **Annexure 2**.
- The attendance records will be maintained and kept with the trainer.
- A copy of the records related to certification will be maintained at the training institution as in Annexure 4.

TRAINING METHODOLOGY

- Training methods should be interactive sessions, discussions, bed side teaching, demonstration of skills, case studies, etc.
- Flexible schedule with less stress on didactic lecture or class room teaching, more priority to be given to clinical practice.
- Trainer should limit himself/herself to impart knowledge/skills as per the guidelines.
- Training curriculum has been divided into 10 different sessions.

- Theory lectures can be scheduled as per the convenience of trainer. Emphasis should be on "Hands on" practise. A sample session plan is attached for feasibility.
- Before the beginning of the training, ensure that sufficient teaching material, partographs, case sheets, stationery, etc., are available.
- Duty register of the trainees should be made available at suitable places and other colleagues and staff are informed about the training and the trainees.
- Proceedings of a session:
 - ✓ **Objectives** what the trainee will be able to do, on completion of each session.
 - ✓ Activities interactive sessions, case studies, CDs, hands on demonstrations and charts.
 - ✓ Key messages/notes (given in the handbook) emphasize important points in the concerned session which should be discussed with the trainee.
- Session plan in the trainers' guide summarizes only the Objectives, Activities, Points of emphasis and Case studies with answers while session plan of the trainees' handbook Contains Objectives, Activities, Notes and Key Messages and Case studies.
- Ensure that any notes for participants you wish to use, are prepared in advance and are made available to your trainees at the beginning of the module/session.
- During clinical practice/ hands on practice, trainee has to use the case sheets, which have been given in the workbook.
- During these clinical sessions, trainer has to observe how the trainee is performing the skills along with the findings on the case sheets filled by the trainee; trainer has to certify the skill as "satisfactory/unsatisfactory".
- Trainer has to ensure that the quality of the training is maintained and issues like privacy, confidential ethics, rights, etc., are maintained.

Feedback

• Feedback from trainees at the end of training (Annexure 3).

SESSION PLAN	-
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Day	Session	Торіс	Time	Methodology
1	1a	Registration,	2 hours	Trainees are to be posted
		Welcome & Introduction to problems of Maternal		at Ante natal OPD/
		Health –Maternal Mortality & objectives of Medical		Labour Room/ Post natal
		Officers' Training. Orientation to the services and facilities		Ward or any other
		available in hospital		relevant place during the
	1b	Care during pregnancy – Antenatal care	1 hour	practice session (minimum
2	2a	Intrapartum Care and Partograph	2 hours	of 6 – 8 hours/day).
	2b	Active Management of Third Stage of Labour (AMTSL)	1 hour	
3	3a	Instrumental delivery	1 hour	
	3Ь	Postpartum Hemorrhage and shock	1 hour	Trainees should be posted
4	4	Essential Newborn care :		to labour room on rotation
		a) Care of baby at the time of birth.		for 24 hours emergency
		b) Care of new born in post natal ward.	2 hours	duty for a minimum of
5	5a	Hypertension in pregnancy	1 hour	4 – 5 days out of 10 days
	5Ъ	Eclampsia	1 hour	of training period.
6	6a	Postpartum care	1 hour	
	6Ъ	Puerperal sepsis	1 hour	
7	7a	Anemia	1 hour	Maximum efforts should
	7Ъ	Other problems during pregnancy		be undertaken to give
		• Urinary tract infection		hands on training to
		• Hyperemesis gravidarum		enhance skills rather than
		• Retention of urine		didactic lectures. Sessions
		• Premature or prelabour rupture of membranes	1 hour	should be interactive.
8	8a	Abortion	1 hour	
	8b	Antepartum hemorrhage	1 hour	
9	9a	Other problems during labour and delivery		
		• Prolonged and obstructed labour		
		• Preterm labour		
		• Foetal distress		The trainer should be
		• Prolapsed cord		flexible in following the
		• Twins	2 hour	suggested lecture schedule
	9Ъ	Other problems during postpartum period		and it can be held at any
		• Inversion of uterus		point of time in the day
		• Problems with breast feeding	1 hour	depending upon the
10	10a	Prevention of infection	1 hour	situation.
			1	

- Registration, Welcome & Introduction to Maternal Health Scenario–Maternal mortality & objectives of Medical Officers training in pregnancy care and management of common obstetric complications.
- Orientation to the Trainees' Books (Guidelines, Handbook and Workbook)
- Orientation to the services and facilities available in hospital, OPD, Ante natal ward, Labour ward, Labour room, Post natal ward and CSSD.

Session 1: Care during pregnancy - Antenatal care

Time: 1 hour

Objectives:

At the end of the session the trainee will be able to -

- Provide quality antenatal care to the mother and ensure delivery of healthy baby.
- Early detection of complications and refer to appropriate health facility.
- Identify place of delivery and ensure that delivery is attended by SBA.

Activities:

- Refer to Guidelines Module, Chapter-1.
- Case study and discussion.
- OPD (Out Patient Department) and antenatal ward
- Summarization of the session by the trainee

Emphasize :

- Any pregnant woman can have complications which can lead to maternal morbidity and mortality.
- Accurate prediction about which woman will develop complications is not possible.
- Make sure that referral services are available to manage obstetric emergencies.
- Emphasize Warning Signs: Following warning signs requires immediate visit to the doctor :
 - o Fever
 - o Headache, blurring of vision
 - o Generalized swelling of the body and puffiness of face
 - o Palpitations, easy fatigability and breathlessness at rest
 - o Continous sever pain in abdomen
 - o Vaginal bleeding / watery discharge
 - o Decreased urinary output
 - o Reduced foetal movements.

Case study 1: (Ask the trainee to write down the answers to the questions asked in relevant session of the Handbook. The suggestive answers have been given here for your reference.)

	a The subgroute and were never given here for your references)
	sha, 24 years old primi gravida comes to OPD with 6 months amenorrhea. This is visit to you. What history will you elicit?
Me Foo Pre H/ Peo Pas Fat	k her LMP enstrual History - regular / irregular etal movements (h/o quickening) evious antenatal checkup 'o any complaints dal edema, headache, urinary complaints st H/o diabetes, hypertension, asthma, RHD, tuberculosis mily history ceived tetanus injection and iron folic acid supplements
B) How wil	ll you calculate the EDD with regular and irregular cycles?
• H/	o regular periods – add 9 months and 7 days to the LMP,
Cy	cles > 28 - 30 days
Ad	ld the extra number of days to arrive at EDD
-	cles < 28 days btract the number of days from the EDD.
C) What get	neral physical & systemic examination will you perform?
• GF	PE:
0	Height and weight
0	Pulse, blood pressure, respiratory rate, temperature Pallor, Pedal edema or Icterus
0	Breast examination (retracted nipple)
• Ca	rdiovascular system
0	Heart sounds & murmurs
	spiratory system Adventitious sounds
• Pet	r abdomen
0	Fundal height
0	Presentation
0	Position & foetal heart rate

- D) What investigations will you do?
 - Hemoglobin, blood group & Rh typing, urine for albumin & sugar *HIV, *HbsAg and *USG. (*Optional)
- E) What drugs will you prescribe to her?
 - Iron & folic acid tab (100 mg elemental iron + 0.5 mg folic acid) every day from 14th week
- F) What advice will you give her regarding immunization?
 - She should receive 2 doses of tetanus toxoid (1st as soon as the pregnancy is registred and 2nd dose after 4-6 weeks of receiving the 1st dose preferably at least 4 weeks prior to EDD)
- G) What other advice will you give her?
 - Advice regarding :
 - o Adequate diet
 - o Rest (8 hrs. at night and 2 hrs in afternoon)
 - o Importance of breast feeding
 - o Birth preparedness
 - 0 Ideal visits
 - o Warning signs
 - Encourage for institutional delivery
- H) When would you call her for the next ante-natal check up?
 - Mandatory visits Registration within 12 weeks, 14-26 weeks, 28-34 weeks and 36 weeks to term.
- I) What are the danger signs that you will warn her against?
 - Fever
 - Headache, blurring of vision
 - Generalized swelling of the body and puffiness of face.
 - Palpitations, easy fatigability and breathlessness at rest.
 - Pain in abdomen.
 - Vaginal bleeding/watery discharge.
 - Reduced foetal movements.

Day 2: Care during labour and delivery

Session 2a: Intrapartum care & Partograph

Time: 2 hours

> Objectives:

At the end of the session the trainee will be able to:

- Diagnose true labour and its stages.
- Identify high risk cases and refer after initial management.
- Monitor labour with partograph.
- Identify deviation from normal and its management.
- Conduct normal delivery.

Activities:

- Refer to Guidelines Module 1, Chapter 2.
- Refer to Annexure 3 & 8 of guidelines, for pelvic assessment and cervical dilation, respectively.
- Visit to labour room.
- Wall chart of partograph.
- Cervical dilatation model.
- Summarization of the session by the trainee.

Emphasize when to refer and steps during referral:

When to refer :

- Pulse rate > 100/ min
- Blood Pressure > 140/90 mm Hg
- Temperature > $100.4^{\circ} F$ (> $38^{\circ}C$)
- Uterine contractions < 2 in 10 min
- Foetal heart rate > 160/ min or < 120/min
- Cervical dilatation crosses the alert line
- Moulding of the foetal head (++)
- Caput succedaneum
- Liquor meconium stained.

***** Steps for referral:

- Inform the higher health facility
- Arrange for transport
- Start an IV line (Preferred IV fluid : RL)
- Left lateral position
- Health care worker & a relative to accompany
- Send plotted Partograph with the patient
- Keep a delivery set and essential drugs ready during transport

Case 1

Plot the findings in the blank partograph. Mrs. Lakshmi a 25 year old primigravida was admitted in labour at 6pm on 2/12/2008.

On admission PR -90/min, BP120/70 mm Hg, Temp -37°C, 3 uterine contractions each lasting for 20 sec in 10 minutes and FHR 140/min. Cervix was 5 cm dilated, membranes ruptured spontaneously at 6.15 pm, liquor clear.

	PR	BP	Temp	P/A	FHR
6:30pm	80	-	-	3 contractions in 10 min.	130/min.
				Each lasting for 30-35 seconds	
7:00pm	90	-	-	3 contractions in 10 min.	140/min.
				Each lasting for 30-35 seconds	
7:30pm	90	-	-	3 contractions in 10 min.	140/min.
				Each lasting for 35-40 seconds	
8:00pm	80	-	37°C	3 contractions in 10 min.	130/min.
				Each lasting for 35-40 seconds	
8:30pm	80	-	-	4 contractions in 10 min.	130/min.
				Each lasting for 40 seconds	
9:00pm	90	-	-	4 contractions in 10 min.	140/min.
				Each lasting for 45 seconds	
9:30 pm	90	-	-	4 contractions in 10 min.	140/min.
				Each lasting for 45-50 seconds	

At 10pm PR -90/min,BP-120/80mmHg, Temp 37°C, 4 uterine contractions in 10 minutes lasting for 45-50 sec, FHR-140 /min. Cervix was fully dilated and liquor clear. She delivered a male baby of 3 kg at 10:30pm on 2nd December 2008.

THE SIMPLIFIED PARTOGRAPH

IDENTIFICATION DATA



Case 2

Mrs. Salma a 25 year old $G_2P_1L_1$ was admitted with labour pains at 10 am on 22/10/2007. She gave history of leaking per vaginum one hour prior to admission. On admission her PR -80/min, BP -110/70mmHg, Temp-37°C, 3 uterine contractions each lasting for 40 seconds in ten minutes, FHR-140/min. Cervix was 6 cm dilated, membranes were absent and liquor was clear.

	PR	BP	Temp	P/A	FHR
10:30am	80	-	-	3 contractions in 10 min.	140/min.
				Each lasting for 45 seconds	
11:00am	80	-	-	3 contractions in 10 min.	150/min.
				Each lasting for 45 seconds	
11:30am	90	-	-	4 contractions in 10 min.	140/min.
				Each lasting for 45-50 seconds	

At 12:00 noon PR-90/min., Temp-37°C, 4 contractions lasting for 45 seconds in 10 minutes, FHR-130/min. Patient bearing down. On P/v, cervix was fully dilated with liquor clear. Mrs Salma had full term normal delivery of female weighing 2.9 kg at 12:20pm on 22nd October 2007.

THE SIMPLIFIED PARTOGRAPH

IDENTIFICATION DATA



Case 3

Mrs. Geeta 20 year old primigravida was admitted with labour pains at 2 pm on 25/10/2007. She gave history of leaking per vaginum 3 hours prior to admission.

On admission PR 80/min., BP-100/70mm Hg, Temp-37°C, 3 uterine contractions in 10 minutes each lasting for 20 seconds,FHR-140/min. Cervix was 5 cm dilated and liquor was clear.

	PR	BP	Temp	P/A	FHR
2:30pm	80	-	-	3 contractions in 10 min.	140/min.
				Each lasting for 30 seconds	
3:00pm	90	-	-	3 contractions in 10 min.	140/min.
				Each lasting for 35 seconds	
3:30pm	90	-	-	3 contractions in 10 min.	140/min.
				Each lasting for 40 seconds	
4:00pm	80	-	37°C	3 contractions in 10 min.	130/min.
				Each lasting for 40 seconds	
4:30pm	80	-	-	3 contractions in 10 min.	130/min.
				Each lasting for 40-45 seconds	
5:00pm	90	-	-	4 contractions in 10 min.	150/min.
				Each lasting for 30 seconds	
5:30pm	100	-	-	4 contractions in 10 min.	150/min.
				Each lasting for 30 seconds	

At 6pm PR-100/min., BP-120/80mmHg, Temp-37°C, 4 uterine contractions lasting for 50seconds in 10 minutes, FHR-150/min. Cervix was 7 cm dilated and liquor was clear.

Since the graph had crossed the alert line, Mrs. Geeta was referred to FRU along with partograph.

THE SIMPLIFIED PARTOGRAPH

IDENTIFICATION DATA



ALERT LINE

Session 2b: Active Management of Third Stage of Labour (AMTSL) Time: 1 hour

Objectives:

At the end of the session the trainee will be able to :

• Practice AMTSL

Activities:

- Refer to Guidelines Module 2, Chapter 1(c)
- Case scenarios & discussion
- Video demonstration on normal labour & AMTSL.
- Visit to labour room
- Summarization of the session by the trainee

Emphasize :

- Practising AMTSL for all patients
- Steps of AMTSL
 - 1. Administration of a uterotonic drug (10 units of Inj. Oxytocin I/M at a health facility or 600 μ g of tablet misoprostol orally in case of home delivery) immediately after the birth of the baby
 - 2. Controlled Cord Traction
 - 3. Uterine Massage
- Always examine placenta for its completeness after it is delivered.

Session 3a: Instrumental Delivery (Obstetric outlet forceps and Ventouse)

Time: 1 hour

Obstetric outlet forceps

> Objectives:

At the end of the session the trainee will develop skills to conduct outlet forceps delivery

Activities:

- Refer to Guidelines, Annexure 23
- Visit to labour room
- Practice on dummy and pelvis.
- Summarization of session by trainee

Ventouse (Vacuum Extractor)

Objectives:

At the end of training the trainee will develop skills to conduct Ventouse Delivery

> Activities:

- Refer to Guidelines, Annexure 24.
- Visit to labour room.
- Summarization of the session by the trainee

Emphasize :

- Indications for instrumental delivery
- Correct application of outlet forceps/ventouse after all the conditions for conducting instrumental delivery are met

(Reemember no foetal pole should be palpable per abdomen before attempting to apply instruments)

• Exploration of the lower genital tract for injuries if any, after instrumental delivery.

Session 3b: Post Partum Haemorrhage and Shock

Time: 1 hour

Objectives:

On completion of the session, the trainee will:

- Detect PPH and assess degree of shock
- Identify types of PPH
- Develop skills for Immediate management of PPH and referral

Activities:

- Refer to Guidelines Module 2, Chapter 1(c)
- Case scenarios & discussion
- Visit to labour room
- Summarization of the session by the trainee

Emphasize :

- Active management of third stage of labour for prevention of PPH
- Treatment of shock after quick assessment of mother's general condition
- Appropriate and timely referral of cases, referral only after starting IV infusion (RL/DNS) and adding 20 units of Oxytocin to it, making sure that the drip runs during transportation of the patient
- Referral to be made only to the hospitals having facilities for blood transfusion
- Inform the medical officer on duty at the referral centre over telephone about patient's condition and also the blood group if known.
- Most facilities need replacement of blood, prepare the family for blood donation and the donors to accompany the patient

Case Study 5: (Ask the trainee to write down the answers to the questions asked in relevant session of Handbook. The suggestive answers have been given here for your reference.)

A) Mrs. Fatima, 28 years old P₄ L₄ gave birth to a full term newborn 2 hours ago at home. Her birth attendant was a TBA, who has brought Mrs. Fatima to the health center because she has been bleeding heavily since childbirth. The duration of labour was 12 hours, the birth was normal and the placenta was delivered 20 minutes after the child birth.Placenta and membranes were complete.

What will you include in your initial assessment of Mrs. Fatima?

- Assess whether patient is in shock.
- B) Clinical Examination findings:

She is pale, cold & sweating

- Pulse 108 / min.
- BP 80 / 60 mmHg.
- RR 24 / min.
- P/A uterus is soft, does not contract with fundal massage

• P/S – heavy bright red vaginal bleeding from Os, no evidence of genital trauma What is Mrs. Fatima's diagnosis?

• Atonic PPH

What is your immediate plan of management?

- Call for help, Resuscitate, Give Uterotonics and Uterine massage
- C) Fifteen minutes after the initiation of treatment, Mrs. Fatima continues to have heavy vaginal bleeding.
 - Pulse 110 / min.
 - BP 80 / 60 mm Hg.

What is your further plan of action for Mrs. Fatima?

- Continue Resuscitation, Anticipate the need for blood transfusion and arrange for immediate transfer
- Bimanual compression of uterus and Aortic compression (Details are given in guidelines & Trainees Handbook)

How do you arrange for Transfer?

- Rapidly arrange for transport & refer where blood transfusion facilities are available.
 - Communicate with the referral hospital and while referring enclose the referral slip (as in Handbook-Annexure I).
 - Accompany the woman to the referral centre or ensure a responsible attendant accompanies the woman to the FRU.
 - If possible, identify donors & ensure donors also accompany the woman during referral but do not delay the referral
 - o Continue resuscitation

Case Study 6: (Ask the trainee to write down the answers to the questions asked in relevant session of the Handbook. The suggestive answers have been given here for your reference.)

A) Mrs. Bharati, 30 years old $P_2 L_2$. She gave birth at the PHC to a newborn weighing 4.2 Kgs. Placenta was delivered 10 minutes later. She was given 10 U of Oxytocin IM after the delivery of placenta. Half an hour after the delivery Mrs. Bharati reports that she has heavy vaginal bleeding What will you include in your initial assessment of Mrs.Bharati? Assess whether patient is in shock. B) Clinical Findings: She is pale, Pulse - 98 / min. BP - 110 / 70 mmHg. - 20 / min RR P/A – uterus is hard, well contracted P/S – Heavy bright red vaginal bleeding; no perineal trauma Visualization of cervix & vagina difficult due to heavy vaginal bleeding Placenta is complete What is Mrs. Bharati's diagnosis? Traumatic PPH • What is your immediate management? • Resuscitate, Inspect vagina and cervix for tears If possible, repair immediately • C) Evaluation: On per speculum examination, patient has multiple vaginal lacerations, including parauretheral tears. There is a cervical tear which has extended upwards till the vault, however, the extent could not be made out Pulse - 110 / min. - 100 / 60 mm Hg. BP

What is your further plan of action for Mrs. Bharati?

- Continue resuscitation
- Tightly pack the vagina
- Arrange for quick transfer

Session 4: Essential Newborn Care

Time: 2 hours

Objectives

At the end of the session the trainee will develop following essential skills:

- Protect the newborn at birth against infection.
- Facilitate the baby to breathe, to be warm, to be fed.

Section a : Care of Baby at the Time of Birth

Objectives

- Provide routine care at birth for all newborns.
- Identify and manage newborns who may need special care.

> Activity

- Refer to Guidelines Module 1, Chapter 4.
- Refer to Notes/Key points in Handbook, under the same session.

Section b : Care of Newborn in Postnatal Ward

Objectives

- Examine all newborns.
- Identify and manage newborns who need special care

Activity

- Refer to Guidelines Module 1, Chapter 4.
- Refer to Notes/Key points in Handbook, under the same session.
- Refer to New Born Case Sheet given in the Workbook. Ensure that trainees are comfortable in using the Case Sheet, while examining the new born baby.

• Video demonstration on :

- ✓ Signs of illness
- ✓ Breast feeding : good attachment
- ✓ Kangaroo mother care
- ✓ Expression of breast milk
- \checkmark How to take care of New Born in Post-natal ward.

- Case study 7: (Ask the trainee to write down the answers to the questions asked in relevant session of the Handbook. The suggestive answers have been given here for your reference.)
- A) B/o Karuna is just born, what are his/her immediate needs?
 To be warm
 To breathe normally
 To be protected (prevent infection)
 To be fed
 B) Enlist the steps in the immediate care of the B/o Karuna at birth.
 - 1. Note the time of birth
 - 2. A baby should be placed onto its mother's abdomen, if this is not possible keep the baby next to the mother on a clean surface.
 - 3. Immediately dry the baby with a warm clean towel or piece of cloth. Wipe the mouth and nose with a clean cloth.
 - 4. Do not wipe off the white greasy substance covering the baby's body (vermix). this helps to protect the baby's skin and gets reabsorbed very quickly.
 - 5. Clamp and cut the umbilical cord with a sterile instrument. Tie the cord with a clean thread, rubber band or a sterile cord clamp.
 - 6. Examine the baby quickly for malformations/birth injury. If there is a major malformation/severe birth injury refer the baby to a newborn unit. Ensure warmth during examination and transportation.
 - 7. Leave the baby between the mother's breasts to start skin-to-skin care.
 - 8. Cover the baby's head with a cloth. Cover the mother and baby with a warm cloth.
 - 9. Place an identity label on the baby.
 - 10. Give Inj. Vit. K 1mg IM
 - 11. Encourage the initiation of breast feeding.
- C) What practices interrupt the time the mother and baby may spend together immediately after birth?

In the first two hours after birth it is not necessary to:

- Weigh or measure the baby.
- Bathe the baby.
- Give the baby any other food apart from breast milk.
- Give the baby to anyone apart from the mother. However normal cultural practices should be respected.
- A newborn baby should not be given bath for at least 24 hours after birth.

D) Mention the places where the baby can get cold?

• Delivery room, post natal ward and at home.

E) How a baby can get cold?

THE ENVIRONMENT

- Cold delivery room, post natal ward and home environment.
- Open windows.
- Broken glass frames, handles.
- Ceiling fans.
- Broken sockets.
- No heaters.
- No room thermometer.

F) What do you think the temperature of this room is?

• It is **not possible** to accurately guess the temperature of a delivery room or any other room. It is better to have a thermometer to measure the temperature accurately. The room temperature should be between 25° C to 30° C.

G) If a room thermometer is not available what may make you think the room is cold?

- You feel cold.
- You need to wear a jacket.
- You feel a draught.
- Babies feel cold to touch.
- Mothers tell you they are cold.

H) How a baby can get cold at birth in the PHC and at home?

- Not drying the baby immediately after delivery.
- Not drying the baby's head.
- Baby left on or in a wet cloth.
- Leaving the baby's head uncovered Placing the baby on a cold surface or under a ceiling fan.
- Separating mother and baby and then **not** covering the baby with sufficient covers.
- No skin-to-skin contact.
- Not breastfeeding soon after birth.
- Giving the baby a bath just after birth.
- Not covering the baby adequately.
- I) How a baby can be kept warm at birth in the PHC and at home?
 - Dry the baby: immediately after birth with a clean dry cloth. Discard the cloth used for drying and cover the head with cap.
 - The baby should be placed on the mother's abdomen, in her arms or on a warm and dry surface and covered with a dry clean cloth. Cover both the mother and baby with blankets.
 - Skin-to-skin contact between the mother and baby is the best way to keep the baby protected against hypothermia.
 - Do not bathe the baby until it is at least 24 hours old.
 - Encourage the mother to breastfeed her baby within one hour after delivery.
 - If a baby and its mother are separated: wrap the baby in a clean, dry and warm cloth and place him/her on a cot. Cover the baby with a blanket. (Use a radiant warmer if the room is cold or if the baby is small.)
 - If the baby needs any emergency treatment, make sure it is kept warm while the treatment is provided.
 - Regular assessment of the baby by touch method is advisable.
 - Change wet nappies regularly

J) How do you diagnose hypothermia?

Diagnosis of hypothermia by human touch

Feel by touch (Trunk)	Feel by touch (Extremities)	Interpretation
Warm	Warm	Normal
Warm	Cold	Cold stress
Cold	Cold	Hypothermia

- K) How to treat hypothermia?
 - Rewarming
 - Skin-to-skin contact is the best way of re-warming
 - 1. Before re-warming a baby remove all of its clothes.
 - 2. Put the baby into:
 - a. A warm shirt that opens down the front
 - b. A nappy
 - c. Warm hat and socks
 - 3. Put the baby between the mother's naked breasts providing skin-to-skin contact. Make sure:
 - The baby's clothes are open in the front.
 - Ensure the baby's naked chest and abdomen are next to the mother's naked chest, so that skin-to-skin contact is maintained.
 - 4. Cover the baby with the mother's clothes and an additional pre-warmed blanket.
 - 5. Check the baby's temperature every hour until normal.

- Case Study 8: (Ask the trainee to write down the answers to the questions asked in relevant session of the Handbook. The suggestive answers have been given here for your reference.)
- A) B/o Karuna is 3 days old, taking feeds well and fit for discharge. What advise will you give to the mother on discharge?
 - 1. Exclusive breast feeding for 6 months
 - 2. Keep the baby warm
 - 3. Follow immunization schedule as per UIP (i.e. National Schedule)
 - 4. Don'ts
 - a. Do not put oil in the eyes, ears, nose
 - b. Do not give any substance, gutti, gripe water, sugar water to the baby
 - c. Do not apply kaajal to the eyes
 - 5. Return for follow-up after 6 weeks (next dose of immunization) Watch for danger signs and report immediately!!
- Case scenario 9: (Ask the trainee to write down the answers to the questions asked in relevant session of Handbook. The suggestive answers have been given here for your reference.)
- **A) Karuna has just delivered and the baby is crying at birth.** Does this baby need help with its breathing?
 - **No**, this baby can be given straight away to his/her mother for establishing skin-to-skin contact and breastfeeding.
- B) Is suction needed for this baby?
 - No, suctioning is not necessary if the baby is crying.
- Case scenario 10: (Ask the trainee to write down the answers to the questions asked in relevant session of Handbook. The suggestive answers have been given here for your reference.)
- A) The baby is not crying, but his/her chest is rising regularly between 30 to 60 times in a minute. Does this baby need help with his breathing at birth?
 - No, this baby needs no help with his/her breathing as long as the chest is rising and falling equally on both sides, around 30 60 times a minute and his/her colour is good.
 - This baby can be given straight to his mother for skin-to-skin contact.
 - No suction is necessary.
- Case scenario 11: (Ask the trainee to write down the answers to the questions asked in relevant session of Handbook. The suggestive answers have been given here for your reference).
- A) Baby not breathing or gasping and the heart rate >100. Does this baby need help with his/her breathing at birth?
 - CALL FOR HELP!
 - Cut cord quickly, transfer to a firm, warm surface [under a radiant warmer]
 - Lightly wrap the baby
 - Inform the mother that baby has difficult breathing and you will help the baby to breathe
 - If drying the baby and additional methods of tactile stimulations do not stimulate baby to breathe, the first step of resuscitation should be started immediately within 1 minute

Case scenario 12: (Ask the trainee to write down the answers to the questions asked in relevant session of the Handbook. The suggestive answers have been given here for your reference.)

A)		baby is NOT breathing and heart rate below 100/min. s this baby need help with his breathing?
		baby needs immediate help with his breathing by using bag and mask. The steps are : Tie and cut the cord. Tell the mother that her baby is having difficulty in beginning to breathe and that you are going to help him/her. Tell her quickly but calmly. Remove the wet cloth or towel. Lightly wrap the baby in a warm, dry towel or cloth Leave the face and upper chest free. Transfer the baby to a warm clean and dry surface, under a radiant warmer if possible. If drying the baby and additional methods of stimulations does not stimulate him to breathe, the first step of resuscitation should be started immediately. Open the Baby's airway. Position the head If the baby is still not breathing, VENTILATE.
B)	How	to ventilate the baby?
	•	Re-check the baby's position. Slightly re-position the baby so that its neck is extended. Dut the folded up piece of cloth under the baby's shoulders at this time. Place the correct mask size on the baby's face so that it covers the baby's chin, mouth and the nose.
	•	 Squeeze the bag attached to the mask with two fingers only (adult size bag) or with the whole hand (newborn size bag). Squeeze and release the bag two or three times. Watch the baby's chest as the bag is squeezed. it should rise as the bag is squeezed.

A)	The baby is NOT breathing and has a heart rate below 60/min even after ventilation
	for 30 seconds. Does this baby need further resuscitation? What are the steps?
	Chest compressions.
	Place the baby on a firm surface.
	• Identify the lower one third of the sternum (i.e., the area between the inter-nipple line and the xiphysternum).
	• Use the index and the middle fingers for compression, compress the sternum by one third of the anterior posterior diameter of the chest @90 times/minute.
	• Ensure coordination between ventilation and cardiac massage, for every 3 chest compressions, offer one assisted ventilation, i.e., a ratio of 3:1.
	• Assess the response to cardiac massage and ventilation by counting the RR and the heart rate.
	Check whether spontaneous respiration has been established.
	• Chest compression can be discontinued when the heart rate rises to >60 beats / min.
B)	When to stop ventilating?
	 If breathing or crying and Heart rate >100/min: STOP VENTILATION. Count breaths per minute.

Case Study 13: (Ask the trainee to write down the answers to the questions asked in relevant

session of the Handbook. The suggestive answers have been given here for your reference.)

- Look for chest in-drawing.
- If breathing >30/min, and no chest in-drawing/grunting:
 - Stop ventilating.

 \triangleright

- o Put the baby in skin-to-skin contact on mother's chest and continue care.
- Monitor every 15 minutes for breathing and warmth.
- Tell the mother the baby will probably be well.
- Encourage the mother to start breastfeeding as soon as possible.
- NEVER leave the baby alone.
- C) What are harmful resuscitation practices?
 - Holding baby up side down and slapping of the back.
 - Squeezing the chest.
 - Sprinkling cold and hot water.

D) Describe the care of a baby AFTER it has been resuscitated

- After resuscitation check the mother, explain to the mother and family what has happened and how the baby is now.
- Keep the mother and baby in the delivery room and DO NOT separate them.
- NEVER leave the woman and newborn alone. Monitor them every 15 minutes during the first hour.

- The mother and baby should be kept together with the baby in skin-to-skin contact.
- Encourage the mother to breastfeed her baby as soon as it is ready.
- The baby should be thoroughly examined before it is discharged.
- Tell parents that although the possibility of complications is low, there is still a small probability that the baby may have problems such as feeding difficulties or convulsions in the first few days.
- Instruct them to take the baby to the nearest hospital if these problems occur. Encourage the mother to maintain skin-to-skin contact as much as possible in the early days after birth.
- Case Study 14: (Ask the trainee to write down the answers to the questions asked in relevant session of the Handbook. The suggestive answers have been given here for your reference).
- A) B/o Meera day 4 of life has developed 2-3 boils on the abdomen. Baby is active and taking feeds adequately. On examination you find few more pustules in the axilla and groin. Identify the danger sign and discuss the management of the child

Local skin infection, less than 10 pustules

- 1. Give oral antibiotic Tab. cotrimoxazole/Tab. amoxycillin for 5 days.
- 2. Teach mother to treat skin infection
 - a. Wash hands with clean water and soap.
 - b. Gently wash off pus and crusts with boiled and cooled water and soap.
 - c. Dry the area with clean cloth.
 - d. Paint with gentian violet.
 - e. Wash hands.
- 3. Follow up in 2 days.
- 4. If no improvement of pustules in 2 days or more, refer urgently to hospital. (with referreal slip as in Annexure I of Handbook.)
- Case Study 15: (Ask the trainee to write down the answers to the questions asked in relevant session of the Handbook. The suggestive answers have been given here for your reference).
- A mother notices pus in her baby's eyes.What should she do?What is the first thing you do, when the baby comes to the hospital?What treatment should be given for an eye infection?What follow up care will you advice?

Eye infection

- 1. Give appropriate antibiotic for eye infection for 5 days.
- 2. Teach mother how to take care of her baby's eyes.

- a. Wash hands with clean water and soap.
- b. Wet clean cloth with boiled and cooled water.
- c. Use the wet cloth to gently wash off pus from the baby's eyes.
- d. Apply 1% tetracycline eye ointment in each eye 3 times daily.
- e. Wash hands
- 3. Follow up in 2 days. If no improvement or worse, refer urgently to hospital. (with referral slip as in Annexure I of Handbook). Assess and treat mother and her partner for possible gonorrhea.
- Case Study 16: (Ask the trainee to write down the answers to the questions asked in relevant session of the Handbook. The suggestive answers have been given here for your reference).
- A) A mother complains of discharge from the umbilicus of her baby who is 8 day old. How do you manage this child?

Local umbilical infection

- 1. Give oral antibiotic : Tab Co-trimoxazole/Tab Amoxycillin for 5 days.
- 2. Teach mother to treat umbilical infection
 - Wash hands with clean water and soap.
 - Gently wash off pus and crusts with boiled and cooled water and soap.
 - Dry the area with clean cloth.
 - Paint with gentian violet.
 - 0 Wash hands
 - If no improvement in 2 days, or if worse, refer urgently to hospital. (with referral slip as in Annexure I of Handbook)
- Case Study 17: (Ask the trainee to write down the answers to the questions asked in relevant session of the Handbook. The suggestive answers have been given here for your reference).
- A) A baby is brought to you with yellow skin on the palms of his/her hands and on the soles of his/her feet. He/She is 30 hours old. Describe how will you treat this baby?
 - ► Jaundice
 - Yellow skin on face and only <24 hours old.
 - Yellow palms and soles and >24 hours old.
 - Management
 - Refer baby urgently to hospital.
 - Encourage breastfeeding on the way.
 - If feeding difficulty, give expressed breast milk by cup/katori.
 - B) What are signs of a sick baby?
 - Fast breathing (more than 60 breaths per minute).
 - Slow breathing (less than 30 breaths per minute).
 - Severe chest in-drawing
 - Grunting
 - Convulsions.

		• Floppy or stiff.
		• Fever (temperature >38°C).
		• Temperature <35°C or not rising after rewarming.
		• Umbilicus draining pus or umbilical redness extending to skin.
		• More than 10 skin pustules or bullae, or swelling, redness, hardness of skin.
		• Bleeding from stump or cord.
		• Pallor.
	\succ	Management
		• Give first dose of IM antibiotics (as per IMNCI protocols).
		• Refer baby urgently to hospital.
	\succ	In addition:
		• Re-warm and keep warm during referral.
		• Treat local umbilical infection before referral.
		• Treat skin infection before referral.
		Stop the bleeding.
C)	Whi	ch major malformations can be diagnosed on examination of the baby at birth?
	•	Newborns with major malformations such as a meningomyelocoele, hydrocephalus, or anterio abdominal wall defects such as a large omphalocoele are easily identified on inspection of the baby a birth.
D)	Whi	ch major malformations can be suspected at birth?
	•	Diaphragmatic hernia may be suspected in a baby with respiratory distress and a scaphoid abdomen Babies with excessive salivation and mucus discharge from the oral cavity may have oesophageal atresia There is an inability to pass a rubber catheter into the stomach. Stools not passed for more than 24 hours suggest anorectal malformations. Urine not passed for more than 48 hours suggest obstructive
	•	uropathy. Persistent Bile stained vomitus suggests intestinal obstruction. Most of these habies reauire immediate surgery for them to survive, and therefore should be referred to

a facility where such babies can be cared for.

Session 5a: Hypertensive disorders of pregnancy – Pre Eclampsia Time: 1 hour

Objectives

At the end of the session the trainee will :

- Identify pre-eclampsia.
- Know types of pre-eclampsia.
- Manage a case of pre-eclampsia on following lines
 - o Antihypertensive therapy
 - o Obstetric management
 - 0 Referral

Activities

- Refer to Guidelines Module 2, Chapter 3 on hypertensive disorders in pregnancy
- Visit to OPD and Labour room.
- Summarization of the session by the trainee.

Emphasize

- Identify PIH by :
 - 1. BP \ge 140/90 mm Hg
 - 2. Proteinuria
 - 3. With or without edema
- Classify whether mild or severe
- Be aware of signs of impending eclampsia, viz.:
 - 1. Headache
 - 2. Blurring of vision
 - 3. Dizziness
 - 4. Decreased urine output
 - 5. Pain in the upper addomen
- Management of severe pre-eclampsia/eclampsia by injection Magsulf
- Referral to FRU after appropriate initial management

- Case Study 18: (Ask the trainee to write down the answers to the questions asked in relevant session of the Handbook. The suggestive answers have been given here for your reference).
- A) Mrs Anita 35 years old grand multi at 38 weeks has come with complaints of headache, blurring of vision and vomiting. Her BP on admission was 180/120 mm Hg, proteinuria+++ What is your diagnosis?
 - Severe pre eclampsia
- B) How will you manage the pregnancy?
 - Administer anti-hypertensives and refer to FRU (with referral slip as in Annexure I of Handbook).
- C) What are the maternal and foetal effects of the same?
 - Maternal: eclampsia, cerebral hemorrhage, abruptio placenta, pulmonary oedema, acute left ventricular failure, acute renal failure, HELLP Syndrome, pneumonia, hepatic necrosis and pulmonary embolism
 - Foetal: Prematurity, IUGR and IUD.
- Case Study 19: (Ask the trainee to write down the answers to the questions asked in relevant session of Handbook. The suggestive answers have been given here for your reference).
- A) Mrs Savita, 18 years old primi gravida came to the OPD at 32 weeks. Her BP readings were 150/100 mm Hg on admission. Urine examination revealed proteinuria +.
 What is your diagnosis?
 - Mild pre-eclampsia
- B) How will you further manage the pregnancy?
 - Inform patient regarding danger signs like headache, vomiting, blurring of vision, epigastric discomfort so that the patient reports immediately to the hospital for further treatment
 - Refer to FRU (with referral slip as in Annexure I of Handbook).
- Case Study 20: (Ask the trainee to write down the answers to the questions asked in relevant session of the Handbook. The suggestive answers have been given here for your reference).
- A) Mrs Angela, 30 years old multi gravida came to the antenatal OPD at 22 weeks. Her BP is 140/90 mm Hg on admission.

What is your diagnosis?

- Pregnancy induced Hypertension
- B) On investigation: Proteinuria is absent What is your diagnosis and how will you manage?
 - Gestational hypertension
 - Follow-up every 2 weeks to have her blood pressure, urine and foetal condition monitored.
 - Counsel about danger signs with emphasis on appearance of pre eclampsia / eclampsia
 - Provide basic antenatal care, deliver at PHC at term
 - Refer to FRU(with referral slip as in Annexure I of Handbook), if she develops proteinuria /danger signs

Session 5b: Eclampsia

Time: 1 hour

Objectives

At the end of the session, the trainee will :

- Understand the magnitude of eclampsia
- Acquire skills for immediate management of eclampsia and referral

Activities

- Refer to Guidelines Module 2 Chapter 3 on hypertensive disorders in pregnancy
- Case study
- Visit to OPD and Labour room
- Summarization of the session by the trainee

Emphasize

- How to administer Inj. Magsulf and monitor a patient on Magsulf therapy.
- If Diastolic Blood Pressure is (DBP) ≥ 110 mm. Hg., give tablet Nifedipine 5 mg. sublingual, can be repeated till DBP falls to 90 mm. Hg.
- If patient not in labour or early labour, refer with proper referral slip to appropriate facility.

- Case Study 21: (Ask the trainee to write down the answers to the questions asked in relevant session of the Handbook. The suggestive answers have been given here for your reference.)
- A) Mrs. Savita P. is 18 years old and is 37 weeks pregnant. This is her first pregnancy. She was brought to the labour room with convulsions. What will you do?

• Place the woman in a semi prone position with the head turned to one side.

- Place a soft mouth gag in between the teeth to prevent tongue bite and facilitate oropharyngeal suctioning.
- Start Oxygen at 4 to 6 lit. per minute.
- Secure IV line and infuse fluids at 60 ml/ hr (Ringer Lactate).
- Catheterize with a self retaining catheter and note the urine output.
- Maintain a strict fluid I/O chart.
- Prepare and give Magnesium Sulfate 20 ml. of 20% solution, 4 g. IV over 5 minutes.
- Follow promptly with 10 g. of 50% Magnesium Sulfate solution, 5 g. in each buttock, deep IM injection with 1 ml of 2% lignocaine in the same syringe.
- Counsel about referral & make arrangement for transfer (with referral slip as in Annexure I of Handbook).
- B) After 5 minutes, Mrs. Savita.P.'s. is no longer convulsing. Her diastolic blood pressure is 110 mm. Hg. and her respiratory rate is 20 per minute.

What is Mrs. Savita.P.'s problem?

• Mrs Savita.P.'s symptoms and signs are consistent with eclampsia.

What will you do next?

• Use Nifedepine 5 mg orally and repeat 5 mg SL if response is inadequate.

What should the aim be with respect to controlling Mrs. Savita.P.'s blood pressure?

• The aim should be to keep diastolic blood pressure below 90 mm. Hg. to prevent cerebral haemorrhage.

What other care does Mrs. Savita P. require now?

- Obstetric management- depending upon her status of labour:
 - If the woman is not in labour or in early first stage of labour, refer to FRU (with referral slip as in Annexure I of Handbook).
 - If the woman is in late first stage or second stage of labour, conduct the delivery and refer to FRU for further management.

C) How will you refer?

- Inform the place of referral telephonically.
- Accompany the woman (medical officer/paramedical worker).
- Place the woman in semiprone position, with mouth gag in-situ.
- Close monitoring of B.P., administer Nifedepine if BP is >160/110mm. Hg.
- Maintain IV line with RL.
- Keep emergency drugs ready MgSO₄.
- Give Oxygen.

D)) Where you will refer?		
	•	FRU/CHC with facilities for emergency obstetric care.	
E)	Wha	What are the maternal complications of eclampsia?	
	•	Abruptio Placenta	
	•	Cerebrovascular accidents (Cerebral haemorrhage)	
	•	Renal failure	
	•	Disseminated intravascular coagulation	
	•	Pulmonary oedema	
	•	HELLP syndrome	
	•	Postpartum psychosis	
F)	What are the foetal complications?		
	•	Preterm birth	
	•	IUGR	
	•	Birth asphyxia	
	•	Intrauterine death	

Session 6a: Care after delivery - Postpartum Care

Time: 1 hour

> Objectives

At the end of the session the trainee will be able to:

- Perform post natal check up
- Detect common complications during puerperium
- Initiate breast-feeding
- Counsel regarding immunization and contraception

- Refer to Guidelines Module 1, Chapter 3
- Post natal case discussion
- Visit to post-natal ward
- Summarization of the session by the trainee

Session 6b: Puerperal Sepsis

Time: 1 hour

Objectives

At the end of the session, the trainee will be able to :

- Define puerperal sepsis.
- Acquire skills for diagnosis & management of puerperal sepsis.

Activities

- Refer to Guidelines Module 2, Chapter 4.
- Case study and discussion.
- Labour room activities.
- Summarization of the session by the trainee.

Emphasize

- Definging puerperal sepsis as two or more of the following signs/symptoms:-
 - 1. Fever > 100.4°F
 - 2. Foul smelling vainal discharge
 - 3. Lower abdominal pain
 - 4. Subinvoluted, soft and tender uterus.
- Management of a case of P. sepsis by parenteral/oral antibiotics
 - 1. Ampicillin
 - 2. Gentamycin
 - 3. Metronidazole
- Referral of cases who donot improve or are toxic (high grade fever and pulse>100/ minute) to higher facility
- Prevention better than cure. Deliveries by skilled personnel in aseptic environment following all clears would prevent cases of P. Sepsis

- Case Study 22: (Ask the trainee to write down the answers to the questions asked in the relevant session of the Handbook. The suggestive answers have been given here for your reference).
- A 23 yr old P₁L₁ with FTD at home 4 days back presents with fever, lethargy and foul smelling vaginal discharge since 2 days. What is your diagnosis?

Puerperal sepsis

- B) How will you examine the case?
 - GPE level of consciousness, dry & coated tongue, temperature, pallor, pedal edema and calf tenderness.
 - CVS Tachycardia, Hypotension.
 - RS Rate, crepitations.
 - PA Sub involuted, soft & tender uterus.
 - PS– Foul smelling discharge.
- C) What investigations will you ask for, if facilities are available?

Hemoglobin %, peripheral smear for toxic granules, TC, DC and urine routine

D) How will you manage?

Management should be as per the flow chart given in the Trainees Handbook

Session 7a: Anaemia during pregnancy and in the postpartum period Time: 1 hour

> Objectives

At the end of the session the trainee will be able to :

- Diagnose anemia
- Treat anemia
- Prevent anemia
- Refer cases of severe anemia to tertiary health care centre/FRU

- Refer to Guidelines module 1, chapter on anemia
- Case study
- Visit to OPD and Labour room
- Summarization of the session by the trainee

 \triangleright Case study 23: (Ask the trainee to write down the answers to the questions asked in the relevant session of the Handbook. The suggestive answers have been given here for your reference.)

A)	Mrs. Surekha, 22 years old lady comes to your OPD with 7 months amenorrhea with complaints of easy fatigability, lethargy and generalized bodyache since 15 days. What is your probable diagnosis?
	Anemia
B)	What will you look for in general physical examination?
	Look for pallor
C)	What investigations will you ask for?
	• Hemoglobin
	 Urine routine Peripheral smear for typing of anemia and malarial parasite
	 Stool for ova and cyst
	• (If facilities are available Blood group and Rh type)
D)	Her Hb is 8 gm%. What is the degree of anemia?
	Moderate anemia
E)	What drugs will you prescribe?
	• Iron and folic acid (100 mg + 0.5 mg B.D.).
F)	What advice will you give?
	 Diet consisting of green leafy vegetables, jaggery, ragi, pulses, liver and meat. Do not take tea and coffee within one hour of meals or iron tablets. Delivery at PHC.
G)	How will you judge the response to the treatment?
	 Sense of wellbeing. Increased appetite. Investigation - increase in Hb% and hematocrit (2 – 3 weeks after starting treatment, irrespective of oral / Parental iron therapy).
H)	When would you call her for follow up?
	• After 4 weeks
I)	When would you refer her to a FRU?
	 Refer her if no improvement occurs after 4 weeks of treatment (refractory anemia) If Hb does not improve and is less than 7 gms% at term, refer to FRU for delivery
J)	What are the maternal complications?
	Infections, cardiac failure, postpartum haemorrhage, puerperal sepsis, subinvolution of uterus and death.
K)	What are the foetal complications?
	• Low birth weight & intrauterine death.

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Session 7b: Other Problems during Pregnancy

Time: 1 hour

Urinary Tract Infection

Objectives

At the end of the session the trainee will be able to:

• Diagnose and Manage UTI.

- Refer to Guidelines Module 2.
- Case study.
- Visit to OPD and Labour room.
- Summarization of the session by the trainee.

- Case study 24: (Ask the trainee to write down the answers to the questions asked in the relevant session of the Handbook. The suggestive answers have been given here for your reference).
- A) Mrs. Shobha 25 years primigravida with 28 weeks of pregnancy reports to you with fever and chills since 4 days associated with burning micturition. What other specific history, will you elicit?

Increased frequency, urgency, hematuria, any abdominal / flank pain

B) What is your diagnosis?

Urinary Tract Infection.

C) What investigations will you advice?

Urine microscopy (clean midstream sample)

- D) Which antibiotics can be given in first trimester?
 - Cap.Cefadroxil 500 mg BD for 10 days
 - Cap.Amoxycillin 500 mg TID for 3 days
 - Tab.Nitrofurantoin 100 mg TID for 10 days

See response after 3 days and if woman responds then continue for 10-14 days.

E) What adverse events can take place due to UTI?

Abortion and pre term delivery

Hyperemesis Gravidarum

Objectives

At the end of the session the trainee will be able to

• Diagnose and Manage Hyperemesis Gravidarum.

- Refer to Guidelines Module 2-chapter 6.
- Case study.
- Visit to labour room.
- Summarization of the session by the trainee.

- Case Study 25: (Ask the trainee to write down the answers to the questions asked in the relevant session of Handbook. The suggestive answers have been given here for your reference).
- A) Mrs. Reena, 18 years primi gravida is 12 weeks pregnant, she has come to you with 10-12 episodes of vomiting, not able to retain food & is having giddiness. What is your diagnosis and what will you do?
 - Hyperemesis Gravidarum
 - Admit the patient, reassure her & her family, start IV fluids either RL or DNS, send for urine ketones & repeat every 4 hours till it becomes negative, give antiemetics and multivitamins
 - Once the vomiting stops and dehydration is corrected, discharge after 24 hours.
 - Advice the woman to take small, frequent, carbohydrate rich meals
- B) What are the investigations you will send?
 - Urine examination to rule out ketones. (USG optional rule out twins and vesicular mole)
- C) What are the complications?
 - Wernicke's encephalopathy, peripheral neuritis, stress ulcers, esophageal tears and rupture & jaundice.
- D) When will you refer her to FRU?
 - If vomiting persists inspite of treatment.

Retention of Urine

> Objectives

At the end of the session the trainee will be able to :

- Identify causes of retention of urine.
- Diagnose and manage retention of urine in pregnancy.

- Refer to Guidelines Module 2, Chapter 6.
- Case study and its discussion.
- Visit to Labour room and postnatal ward.
- Summarization of the session by the trainee.

- Case study 26: (Ask the trainee to write down the answers to the questions asked in the relevant session of the Handbook. The suggestive answers have been given here for your reference).
- A) Mrs Praveena is 20 years old and is 12 week pregnant. She came to the ante natal clinic with history of inability to pass urine since 2days. How will you diagnose retention of urine?
 - On P/A examination cystic swelling (bladder).
- B) What could be the cause of retention of urine?
 - UTI.
 - Incarcerated retroverted gravid uterus.
 - Impacted pelvic tumor.

C) How will you manage?

- Under all aseptic precautions insert a self retaining Foley's catheter and collect urine for microscopy (this measure allows the uterus to rise above the pelvic brim) or put the woman in prone position so that the uterus becomes anteverted.
- Continue catheterization for 48 hours.
- Prophylactic antibiotics Cap. Amoxycillin 500 mg. TID for 5 days.
- Ensure that the woman passes urine after removal of catheter.

Prelabour / Premature rupture of membranes

> Objectives

At the end of the session the trainee will :

- Understand the problem of PROM
- Acquire skills needed for diagnosis of PROM.
- Manage and refer timely.

- Refer to Guidelines Module 2, Chapter 6.
- Case study and its discussion.
- Visit to labour room.
- Summarization of the session by the trainee.

- Case Study 27: (Ask the trainee to write down the answers to the questions asked in the relevant session of Handbook. The suggestive answers have been given here for your reference).
- A) Sujatha, 26 yrs., primigravida, with 7 months of amenorrhea, reported to labour room with watery vaginal discharge 1hr prior to admission. On P.A. examination – uterus 28 weeks size, relaxed, P/S examination – active leak is present. What is your provisional diagnosis?
 - Primi with 28 weeks pregnancy with pre term PROM not in labour.
- B) How will you manage this case?
 - Sterile pad.
 - Antibiotics Ampicillin, Metronidazole and Inj. Gentamycin (combination of antibiotics to reduce morbidity caused by infection)
 - Give first dose of Inj. Betamethasone IM 12 mg.
 - If there are contractions, manage accordingly by giving tocolytics.
 - Refer to FRU (with referral slip as in Annexure I).

Session 8a: Abortions – Haemorrhage during early pregnancy Time: 1 hour

> Objectives

At the end of the session the trainee will know :

- Causes of bleeding in early pregnancy.
- Types of abortion.
- Diagnosis & management of different types of abortions.
- Diagnosis & management of complications of abortions.
- Counseling regarding contraception & follow up.

- Refer to Guidelines Module 2, Chapter 1.
- Abortion case scenarios & Discussion.
- Visit to Labour room.
- Summarization of the session by the trainee.

- Case Study 28: (Ask the trainee to write down the answers to the questions asked in the relevant session of the Handbook. The suggestive answers have been given here for your reference).
- A) Mrs. Humera is 19 years old and 10 weeks pregnant. This is her first pregnancy. She came to labour room with c/o pain in abdomen and P/V bleeding for 2 hours. What is your probable diagnosis?
 - Abortion.
- B) On examination:

P.R - 76 /min., BP - 120/70 mm. of Hg.

P/A - NAD

- P/S minimum bleeding through Os +
- $\rm P/V~$ size of uterus corresponds to 10 weeks, Os closed.
- USG Optional (for viability of foetus).

What is your diagnosis?

- Threatened abortion.
- C) How will you manage this case?
 - Restrict activities.
 - No medication required.
 - Refer to FRU for ultrasound subsequently.
- Case Study 29: (Ask the trainee to write down the answers to the questions asked in the relevant session of the Handbook. The suggestive answers have been given here for your reference).
- A) Mrs. Amita is 19 years old and is 10 weeks pregnant. This is her first pregnancy. She came to labour room with c/o pain in abdomen and P/V bleeding for 4 hours.

On examination:

 $\mathrm{P.R}-76$ /min., $\mathrm{BP}-120/70$ mm. of Hg.

- P/A NAD
- P/S excessive bleeding +, Os open, products seen at the Os
- P/V uterus corresponds to 10 weeks of gestation

What is your diagnosis?

- Inevitable abortion
- B) How will you manage this case?
 - Evacuate the uterus using MVA.

- Case Study 30: (Ask the trainee to write down the answers to the questions asked in the relevant session of Handbook. The suggestive answers have been given here for your reference).
- A) Mrs. Gurupreet 20 yr old, G₂ P₁L₁ with 10 weeks pregnancy came with c/o pain in abdomen,
 P/V bleeding since 12 hrs. and h/o passage of products of conception.

On examination:

Pallor ++

Pulse - 120/min.

- BP 100/60mm. Hg.
- RR 40/ min.
- P/A NAD
- P/S~ active bleeding through Os +, clots ++, Products seen at the Os

P/V - uterus bulky (6 weeks), products of conception felt at the Os.

Os – open.

What is your diagnosis?

• Incomplete abortion.

B) How will you manage this case?

- Using ovum holding forceps remove the protruding products of conception
- If the bleeding is heavy / shock, stabilize her (Start IV fluids, collect blood for grouping and cross matching) and refer to FRU (with referral slip as in Annexure I).
- Case Study 31: (Ask the trainee to write down the answers to the questions asked in the relevant session of the Handbook. The suggestive answers have been given here for your reference).
- A) Mrs. Catherine, 20 years old, $G_2 P_1 L_1$ with 10 weeks pregnancy came with
 - c/o pain in abdomen & P/V bleeding since 12 hrs.
 - h/o passage of products of conception

On examination:

P.R - 76 /min., BP - 120/70 mm. of Hg.

- P/A NAD P/S minimum bleeding
- P/V uterus 6 weeks size, Os closed.

What is your diagnosis?

• Complete abortion

B) How will you manage this case?

- No further management is required if she is stable
- o USG optional (to confirm complete abortion)
- *F*/*up after 1 week/or when bleeding starts*

- Case Study 32: (Ask the trainee to write down the answers to the questions asked in the relevant session of Handbook. The suggestive answers have been given here for your reference).
- A) Ms. Lalita, 18 yrs. old girl came with c/o fever since 10 days; bleeding P/V, foul smelling discharge, pain in abdomen and vomiting since 3 days. Past h/o having undergone D&C for 10 wk. pregnancy, 12 days back. What is your probable diagnosis?
 - Septic abortion
- B) On examination:

Patient is febrile and toxic.

Pallor +++

Pulse 140/min.

BP 100/ 60 mm. of Hg.

RR 30/min.

P/A - fullness in lower abdomen, rigidity +, rebound tenderness +, BS sluggish P/S - foul smelling discharge +, minimum bleeding +

 $\rm P/V\,$ - uterus bulky, uterine tenderness +, fornices tender, fullness felt in the Pouch of Douglas.

What is your diagnosis?

• Septic abortion with peritonitis

How will you manage this case?

- First dose of IV Antibiotics Ampicillin, Gentamycin & Metronidazole
- Refer to FRU (with referral slip as in Annexure I) of Hanbook.
- Case Study 33: (Ask the trainee to write down the answers to the questions asked in the relevant session of the Handbook. The suggestive answers have been given here for your reference).

A) Ms. Salma, 20 yrs. old nullipara, came with h/o bleeding per vagina since 2 days, pain in lower abdomen with vomiting and one episode of giddiness since 4 hours. Her LMP was 2 days back. O/E pulse 120 / min, BP 80/60 mm. Hg., Pallor +++, P/A – tenderness in the lower abdomen, P/V – cervical motion tenderness, fullness in pouch of Douglas. What is your probable diagnosis?

• Ruptured ectopic pregnancy in shock.

B) How will you manage this case?

- Start IV fluids (rapid infusion).
- Draw blood for Hb%, grouping and cross matching.
- Give Oxygen.
- Position her to one side.
- Keep her warm.
- Elevate the legs.
- Monitor pulse, BP and urinary output.
- Refer to FRU as soon as possible for laprotomy.

Session 8b: Antepartum Haemorrhage - Bleeding during late pregnancy & labour

Time: 1 hour

> Objectives

At the end of the session the trainee will be able to comprehend :

- Causes of bleeding during late pregnancy & labour
 - o Placenta previa
 - o Abruptio placentae
 - o Rupture uterus
- Diagnosis of placenta previa, abruptio placentae and rupture uterus.
- General management and referral.

Activities

- Refer to Guidelines Module 2, Chapter 1(b)
- Case scenarios & Discussion
- Visit to labour room
- Summarization of the session by the trainee

Emphasize

Bleeding during second half of pregnancy should be considered as because of placenta previa unless proved otherwise and any vaginal examination is CONTRA-INDICATED, as it may provoke heavy bleeding.

- Case Study 34: (Ask the trainee to write down the answers to the questions asked in the relevant session of Handbook. The suggestive answers have been given here for your reference).
- A) Mrs. Swati, 30 years old $G_4P_3L_3$ with 32 weeks of pregnancy has come with H/o painless vaginal bleeding for 2 hours. What is your probable diagnosis?
 - Antepartum haemorrhage

B) General examination: reveals

Pallor +, Pulse 100/ min., BP 110/ 70 mm. Hg., oedema absent

P/A - Ut 32 weeks size, relaxed soft, not tense, not tender FHS – 142/ min., regular P/S - bleeding from the Os present

What is your diagnosis?

Placenta praevia

C) How will you manage this case?

- Start IV fluids, collect blood for Hb%, grouping and cross matching
- Assess degree of shock
- Refer to FRU (with referral slip as in Annexure I) of Handbook.
- Case Study 35: (Ask the trainee to write down the answers to the questions asked in the relevant session of the Handbook. The suggestive answers have been given here for your reference).
- A) Mrs. Seeta , 20 years old primigravida with 30 weeks pregnancy comes with H/o Pain in abdomen followed by bleeding per vagina.

What is your probable diagnosis?

Ante partum haemorrhage

B) General examination: reveals

Pallor +++, Pedal oedema ++, Pulse 120/ minute, BP 90/ 60 mm. Hg.

P/A - Ut 36 weeks, tense tender, FHS absent.

P/S – slight bleeding + from the Os.

What is your diagnosis?

Abruptio placenta

C) How will you manage this case?

- Start IV fluids, collect blood for Hb%, grouping and cross matching.
- Assess degree of shock.
- Refer to FRU (with referral slip as in Annexure I) of Handbook.

Session 9a: Other problems during pregnancy and labour Time: 1 hour

Prolonged and Obstructed Labour & Partograph

> Objectives

At the end of session, the trainee will know:

- Causes of prolonged labour.
- Diagnosis of obstructed labour.
- Sequelae of obstructed labour.
- > Activities for Management of prolonged labour
 - Refer to Guidelines Module 2, Chapter 3.
 - Case study and discussion.
 - Visit to labour room.
 - Summarization of the session by the trainee.

- Case Study 36: (Ask the trainee to write down the answers to the questions asked in the relevant session of Handbook. The suggestive answers have been given here for your reference).
- A) 20 yrs. old Mrs Lakshmi, primigravida is admitted with labour pains at 5 a.m. On examination at 5 a.m. (0 hour) : PR 90/min., BP 120/80mm. Hg., Temp 37.4°C, P/A 3 Contractions for 15-20 sec./10min., FHS 140/min. P/V Cervix 4cm dilated, membranes present. What will you do?
 - Monitor for progress of labour.
- B) At 4 hours:
 - PR 98/min., BP120/70mm.Hg., Temp. 38°C
 - P/A 3 Contractions for 20-25 sec./10min., FHS 126/min.
 - P/V Cervix 5cm dilated, membranes present

Is the progress normal?

• The cervical dilatation is not as expected, i.e., 1 cm / hr, hence the progress is delayed

C) How will you refer?

- Talk to the relatives about the condition of the patient.
- Call the tertiary care FRU center and inform about the case.
- Arrange for transport.
- A skilled birth attendant should accompany the woman with the delivery kit.
- Take the plotted partograph.
- Shift the woman in left lateral position (LLP) preferably.
- Secure an IV line.
- Oxygen mask (if there is foetal distress).

D) What are the signs of obstructed labour?

- General physical examination: tachycardia, signs of dehydration, febrile.
- Per abdomen: Bandl's ring.
- Local examination: oedema of the vulva.
- PV: Hot & dry vagina.
- Oedema of the cervix, Caput and moulding.

Preterm Labour

> Objectives

At the end of the session the trainee will be able to:

- Diagnose preterm labour.
- Reduce adverse outcome due to preterm labour in the baby.

- Refer to Guidelines Module 2 : Preterm Labour..
- Case study and discussion.
- Visit to labour room.
- Summarization of the session by the trainee.

- Case study 37: (Ask the trainee to write down the answers to the questions asked in the relevant session of Handbook. The suggestive answers have been given here for your reference).
- A) Mrs Latha, 20 years old primigravida has come with 8 months amennorhoea and labour pains for 1 ¹/₂ hours

How will you diagnose preterm labour?

- Pain in abdomen with vaginal discharge/ show.
- P/A Regular uterine contraction (atleast four in 20 min).
- Threatened preterm cervical dilatation < 3 cms and effacement < 80%.
- Established preterm labour cervical dilatation >3 cms and effacement of >80 %.

How will you mange this case?

- Admission.
- Bed rest.
- Inj. Betamethasone 12mg IM, Ist dose.
- Start tocolytics (Salbutamol, Indomethacin) as per Module 2 Chapter 7 of Guidelines for Pregnancy Care and Management of Common Obstetric Complications for Medical Officers.
- In-utero transfer to higher health facility (after 1st dose of Inj. Bethamethasone and Tocolytic).
- If in advanced stage of labour conduct delivery and shift mother and baby to FRU. (With referral slip as in Annexure I).

Foetal distress

> Objectives

At the end of session the trainee will be able to :

• Diagnose and manage foetal distress.

Activities

- Refer to Guidelines Module 2 Chapter 7.
- Visit to labour room.
- Summarization of the session by the trainee.

Cord Prolapse

Objectives

At the end of session the trainee will be able to :

• Diagnose and manage cord prolapse.

Activities

- Refer to Guidelines Module 2 Chapter 7.
- Visit to labour room.
- Summarization of the session by the trainee.

Twins

> Objectives

At the end of the session the trainee will be able to:

- Diagnose multiple pregnancy.
- Anticipate adverse events of multiple pregnancy.

- Refer to Guidelines Module 2; Chapter 7.
- Case study and discussion.
- Visit to OPD, antenatal ward and labour room.
- Summarization of the session by the trainee.
- Case Study 38: (Ask the trainee to write down the answers to the questions asked in the relevant session of Handbook. The suggestive answers have been given here for your reference).
- A) Mrs. Parvathi, 20 yrs. old primi gravida comes to OPD with 7 1/2 months amenorrhea.
 O/E pallor +, uterus 32 weeks size, multiple foetal parts felt with palpation of 2 foetal heads. What is your diagnosis?

Twin pregnancy.

B) Will your ANC differ for case of multiple pregnancy?

No, provide routine ANC but stress upon frequent visits and rest in later trimester

- C) What are the antenatal complications?
 - Maternal Complications :
 - Hyperemesis
 - Abortion
 - Anemia
 - Antepartum hemorrhage
 - Respiratory distress
 - Polyhydramnios
 - Preeclampsia
 - Malpresentation
 - Preterm delivery
 - Foetal Complications
 - IUGR, congenital malformation IUD

D) What are the danger signs you will warn her against?

- To report immediately if :
 - Pain in abdomen
 - Bleeding p/v
 - Leaking p/v
 - Decreased foetal movements
- ➤ When will you refer?
 - Refer to FRU for delivery. (With referrel slip as in Annexure I of Handbook)

Day 9

Session 9b: Other Problems during postpartum period

Time: 1 hour

Inversion of Uterus

> Objectives

At the end of the session the trainee will be able to:

- Prevent the occurrence of acute inversion of uterus
- Diagnose and manage inversion of uterus.

Activities

- Refer to Guidelines Module 2, chapter 8.
- Summarization of the session by the trainee.

Breast Problems: Mastitis and Breast Abscess

Objectives

- Examination of breast routinely in antenatal and puerperal women, thus preventing complications.
- Identification of breast problems and treat accordingly.
- Educate and promote exclusive breast feeding.

Activities

- Refer to Guidelines Module 2; Chapter 8.
- OPD and postnatal ward.
- Case scenario.
- Summarization of the session by the trainee.

- Case 39: (Ask the trainee to write down the answers to the questions asked in the relevant session of Handbook. The suggestive answers have been given here for your reference).
- A) Karuna has come to you complaining of painful nipples when she breastfeeds. How will you help her?
 - Look for the cause:
 - Check the baby's position at the breast.
 - Check the baby's attachment to the breast,
 - Examine the breasts engorgement, fissures.
 - Give appropriate treatment:
 - Build the mother's confidence.
 - Improve the baby's attachment and continue breastfeeding.
 - Reduce engorgement; feed frequently, express breast milk.
- Case 40: (Ask the trainee to write down the answers to the questions asked in the relevant session of Handbook. The suggestive answers have been given here for your reference).
- B) Laxmi c/o fullness of breasts in the first two days after delivery what other information and advice will you give. What do you think is wrong?
 - She should feed whenever her baby wants to be fed (on demand).
 - She should not restrict the length of time the baby spends at the breast.
 - If she becomes uncomfortably full she should offer to feed her baby more often.
 - The mother needs to be reassured that this 'condition' is **NORMAL** and lasts for around 36 to 72 hours.
- C) What are the differences between full and engorged breasts?

Full Breasts:	Engorged Breasts :
• Normal, occurs 36/72 hours after birth.	• Abnormal, can occur at any time
• Hot, heavy, may be hard.	during breastfeeding.
Milk flowing.	• Painful oedematous.
• Fever uncommon.	• Tight, especially nipple area.
	• Shiny.
	• May look red.
	• Milk not flowing.
	• Fever may occur Engorgement may
	cause a decrease in milk supply if it
	happens often.

- Case 41: (Ask the trainee to write down the answers to the questions asked in the relevant session of Handbook. The suggestive answers have been given here for your reference).
- A) A mother complains of pain in the breasts and fever. On assessment of a breastfeed, the baby is not well attached. On examination both breasts are swollen and painful. What is your diagnosis and how will you treat her? What advice will you give to this mother?
 - Engorged breasts
 - > Treatment
 - If the mother has very full or engorged breasts, and her baby has difficulty attaching, advise her to express a little milk to soften the nipple area. This makes it easier for the baby to attach correctly.
 - It is important that the mother continues to feed on demand and does not restrict the time the baby breastfeeds. Breastfeeding more frequently may help the mother.
 - Make sure the baby is correctly attached and positioned.
 - Look for the cause:
 - Is the interval between feeds for long periods?
 - Is she restricting the length of the feeds?
 - Is the baby well attached?
 - Give analgesics to the mother-Tab. paracetamol 500mg tid
 - Hot fomentation to relieve pain
 - > Promote :
 - Early initiation.
 - Good attachment and positioning.
 - Demand feeding.
 - Bedding in.
 - Encouraging night feeds.
- Case 42: (Ask the trainee to write down the answers to the questions asked in the relevant session of Handbook. The suggestive answers have been given here for your reference).
- A) Smitha c/o high fever and feels ill. On examination of the breast, there is a well-defined, red, sore and swollen area in ONE of her breasts What is your diagnosis and how will you treat her?
 - Mastitis.
 - Treatment :
 - The mother should continue breastfeeding.
 - Correct attachment and positioning.
 - Give her Tab. Cloxacillin for 10 days.
 - If in severe pain give her paracetemol.
 - Reassess in 2 days. If no improvement refer her to hospital (with referrel slip as in Annexure I) of Handbook.

- Case 43: (Ask the trainee to write down the answers to the questions asked in the relevant session of Handbook. The suggestive answers have been given here for your reference).
- A) Sujatha c/o fever and painful, soft swelling in the left breast. On examination of the breast, there is a tender ,soft, fluctuant swelling . What is your diagnosis and how will you treat her?

Breast abscess

B) How to prevent breast feeding problems?

By Promoting :

- Early initiation.
- Good attachment and positioning.
- Demand feeding.
- Bedding in.
- Encouraging night feeds.

Day 10

Session 10a: Prevention of Infection

Time: 1 hour

> Objectives

At the end of the session the trainee will :

• Know the basic principles of prevention and control of infection.

Activities

- Refer to Guidelines, Module 3 chapter 2.
- Visit to labour room and Central Sterile Supplies Department (CSSD).
- Summarization of the session by the trainee.

Annexure 1 Checklist for Training Site Readiness

Name of training site_____

District and State_____

Date of assessment_____

Name and designation of Assessor_____

SN	Item	Observation Yes/No	Remarks
А.	Number of deliveries per month		
B 1.	Practising-		
	1. Partograph		
	2. AMTSL		
	3. Mg SO4 for eclampsia		
	4. Essential newborn care		
B 2.	Protocols and checklists for Emergency Obstetric		
	care including PPH and above mentioned topics to		
	be displayed in the labour room prominently		
С.	Labour Room		
	1. Privacy maintained		
	2. Adequate light to visualize cervix		
	3. Electricity supply with back-up facility		
	(generator with POL)		
	4. Attached toilet facilities		
	5. Delivery table with mattress and		
	Macintosh and Kelly's pad		
	6. Area marked for newborn care and		
	newborn resuscitation		
	7. Nursing Station		
D.	Emergency OT 24 X 7		
E.	Laboratory Services 24 x 7		
F.	Blood Bank		
G.	Infection prevention equipment		
F.	Drugs required to practice AMTSL, management		
	of eclampsia, PPH		
	1. Injection Oxytocin		
	2. Injection Methergine		
	3. Injection Magnesium sulphate		
	4. Injection Lignocaine Hydrocholoride		
	5. Injection Diazepam		
	6. Antibiotics		

SN	Iter	n	Observation Yes/No	Remarks
	7.	IV Fluids		
	8.	Tablet Nifedipine		
H.	Equ	ipments		
	1.	Delivery kits including those for normal		
		deliveries and assisted deliveries (forceps and		
		Ventouse extraction) at least four each		
	2.	Equipment for Essential newborn care and		
		resuscitation		
I.	Tea	ching Aids		
	1.	Antenatal card		
	2.	Partograph		
	3.	Charts, Protocols, Skill Checklist		
	4.	Infant mannequin		
	5.	Female pelvis and dummy		
	6.	Audio-visual aids		

	Activity	Observe	Perform independently
1.	Antenatal Check-up	5	20
2.	Identify and management of different complications of pregnancy	5	5
3.	Preparing delivery trolley/ equipment	5	-
4.	Perform PV examination	2	5
5.	Monitor labour, plot & interpret Partograph	2	5
6.	a) Conduct normal delivery	2	5
	b) Active management of 3 rd stage	2	5
	c) Examination of placenta, membranes, umbilical cord	2	5
7.	ENBC procedures & assess and provide NBC, including		
	Resuscitation of *new born and check weight.	2	5
8.	Assist the mother to initiate & continue BF	2	5
9.	Management of PPH*	2	1
10.	Removal of products of conception/ clots under supervision*	2	2
11.	Identification & Management of perineal tears	2	2
12.	Emergency management of Eclampsia*	1	1
13.	Identification and management of other complications of labour	3	-
14.	Postnatal checkup	2	5
15.	Identification and management of complications of post		
	partum period	2	3
16.	Identification and management of danger signs in neonate	2	2
17.	Emergency obstetric procedure		
	Forceps delivery / Vacuum extractions*	2	2

Annexure 2 Recommended Client Practice by Trainee

• The trainers will ensure and monitor quality and practicing of these skills

• Trainee should keep a daily signed Cumulative Client Practice Record.

• This record will be utilized by Trainer for certification

* Note: in case there is no client/patient on whom any of the above skills cannot be performed, then in such situations, the trainer should use models or innovative approaches suggested to enable the trainees to perform the skills.

Annexure 3

Trainers' and Trainees' Feedback Form for Training of Medical Officers in Pregnancy Care and Management of Common Obstetric Complications

Name of training site and district		
Dates of training (from-to: date/month/y	/ear)	
Feedback (tick the appropriate category)	TrainerTrainee	

Note: The purpose of this form is to give trainers and program managers information regarding the quality of this training activity. For each statement below, please tick (\checkmark) the response that best describes your feelings or reactions about that aspect of training. All the trainers and trainees participating in the training will fill this form separately. There are some questions which are relevant for trainees only and some for trainers only. The rest of the statements are common to both the trainers and trainees and should be completed.

1. Workshop objectives were clear and were achieved.

Yes No	00
--------	----

If No, specify_____

2. Both the content covered and the duration of the workshop were adequate.

Yes_____ No_____

If No, suggest the optimum duration_____

- 3. This training was directly related to the work I do or I am going to do.
 - Yes_____

4. Training facilities and arrangements were adequate.

No			

No_____

If No, give suggestions for improvement _____

5. The trainers for this training were effective in helping me learn and apply concepts and skills (for trainees only)

No_____

Yes	

If No, suggest what would have helped you learn better_____

6. Below are training materials used during the training. Please indicate how well each contributed to understanding or learning.

Training material	Very useful	Somewhat useful	Not useful	Undecided
GoI's Guidelines				
Handbook				
Facilitator's guide (Trainers only)				
Work book				

7. Below are training methods used during the training of MOs in pregnancy care & management of common obstetric complication. Please indicate how well each contributed to understanding or learning.

Training method	Very useful	Somewhat useful	Not useful	Undecided
Demonstration				
Practice on clients				
Skills checklists				
Discussion				
Partograph exercises				
Any other				

8. Do you feel confident to provide delivery and supportive services, including newborn care services and applying the new skills learnt during this training at your work site? (For trainees only)

Yes	No	Undecided

If No, or undecided specify the services/skills in which you feel you need more practice.

Annexure 4 Record/Assessment Form for the Trainee Recommended Client Practice by Trainee

	Activity	Observe	Perform Independently	Grading by Trainer Satisfactory/ Unsatisfactory
1.	Antenatal Check-up			
2.	Identification and management of different complications			
	of pregnancy			
3.	Preparing delivery trolley/ equipment			
4.	Perform PV examination			
5.	Monitor labour, plot & interpret Partograph :			
6.	a) Conduct normal delivery			
	b) Active management of 3 rd stage			
	c) Examination of placenta, membranes, umbilical cord			
7.	ENBC procedures & assess and provide NBC, including			
	resuscitation of new born and check weight.			
8.	Assist the mother to initiate & continue breast feeding			
9.	Management of PPH			
10.	Removal of products of conception/ clots under			
	supervision			
11.	Identification and Management of Perineal Tears			
12.	Emergency management of eclampsia			
13.	Identification and management of other complications			
	of labour			
14.	Postnatal checkup			
15.	Identification and management of complications of post			
	partum period			
16.	Identification and management of danger signs in neonate			
17.	Emergency obstetric procedure			
	forceps delivery / vacuum extractions			

Remarks: _____

Grading: Satisfactory / Needs re-orientation

Name and Signature: ____

Date: _____

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